

IN THE SPECIFICATION

On page 4, please replace the paragraph between lines 33-37 with the following amended paragraph:

G1
Figure 1 shows the alignment of the serine/threonine (S/T) kinase domains (I-VIII) of related receptors from transmembrane proteins, including embodiments of the present invention. The nomenclature of the subdomains is accordingly to Hanks *et al* (1988). The sequences displayed are (from top to bottom) SEQ ID NO: 30 to 33.

On page 5, please replace the paragraph between lines 5-10 with the following amended paragraph:

G2
Figure 3 is a comparison of the amino-acid sequences of human activin type II receptor (Act R-II)(SEQ ID NO: 34), mouse activin type IIB receptor (Act R-IIB)(SEQ ID NO: 35), human TGF- β type II receptor (T β R-II)(SEQ ID NO: 36), human TGF- β type I receptor (ALK-5)(SEQ ID NO: 10), human activin receptor type IA (ALK-2)(SEQ ID NO: 4), and type IB (ALK-4)(SEQ ID NO: 8), ALKs 1 & 3 (SEQ ID NO: 2 and SEQ ID NO: 6) and mouse ALK-6 (SEQ ID NO: 18).

On page 5, please replace the paragraph between lines 14-16 with the following amended paragraph:

G3
Figure 5 shows the sequence alignment of the cysteine-rich domains of the ALKs (position 34-95 of SEQ ID NO: 2, position 35-99 of SEQ ID NO: 4, position 59-130 of SEQ ID NO: 6, position 34-101 of SEQ ID NO: 8 and position 34-106 of SEQ ID NO: 9), T β R-II (position 30-110 of SEQ ID NO: 36), Act R-II (position 29-109 of SEQ ID NO: 34), Act R-IIB (position 49-143 of SEQ ID NO: 35) and daf-1 (position 56-152 of SEQ ID NO: 37) receptors.

On page 19, please replace the paragraph between lines 16-23 with the following amended paragraph:

G4

The catalytic domains of kinases can be divided into 12 subdomains with stretches of conserved amino-acid residues. The key motifs are found in serine/threonine kinase receptors suggesting that they are functional kinases. The consensus sequence for the binding of ATP (Gly-X-Gly-X-X-Gly, SEQ ID NO. 26, in subdomain I followed by a Lys residue further downstream in subdomain II) is found in all the ALKs.

On page 20, please replace Table 2 with the following amended Table 2:

11/16/05

G5

KINASE	SUBDOMAINS	
	VIB	VIII
Serine/threonine kinase consensus	DLKPEN <u>SEQ ID NO: 38</u>	G (T/S) XX (Y/F) X <u>SEQ ID NO: 43</u>
Tyrosine kinase consensus	DLAARN <u>SEQ ID NO:39</u>	XP(I/V) (K/R) W (T/M) <u>SEQ ID NO: 44</u>
Act R-II	DIKSKN <u>SEQ ID NO: 40</u>	GTRRYM <u>SEQ ID NO: 45</u>
Act R-IIB	DFKSKN <u>SEQ ID NO: 41</u>	GTRRYM <u>SEQ ID NO: 45</u>
TBR-II	DLKSSN <u>SEQ ID NO: 42</u>	GTARYM <u>SEQ ID NO:46</u>
ALK-I	DFKSRRN <u>SEQ ID NO: 27</u>	GTKRYM <u>SEQ ID NO: 29</u>
ALK -2, -3, -4, -5, & -6	DLKSKN <u>SEQ ID NO: 28</u>	GTKRYM <u>SEQ ID NO: 29</u>